Abstracts

Computer-Aided Design Models for Millimeter-Wave Finlines and Suspended-Substrate Microstrip Lines

P. Pramanick and P. Bhartia. "Computer-Aided Design Models for Millimeter-Wave Finlines and Suspended-Substrate Microstrip Lines." 1985 Transactions on Microwave Theory and Techniques 33.12 (Dec. 1985 [T-MTT] (1985 Symposium Issue)): 1429-1435.

This paper presents closed-form expressions that model the electrical characteristics of finlines and suspended-substrate microstrip fines over a wide range of structural parameters for millimeter-wave applications. The expressions for finlines are within ±0.8 percent for the cutoff wavelength and within ±2 percent for the phase constant and the characteristic impedance (based on the power-voltage definition for a small slot (d/b <= 0.2)) of spectral-domain results. The expressions for suspended and inverted microstrips me within ±1 percent. The equations are vital to CAD of millimeter-wave planar circuits using these media.

❑ Return to main document.